NAME _____

Module 5 Solving Linear Inequalities of One Variable

Lesson 2 Solving One-Step Linear Inequalities

guided notes

Lesson Objectives

- Solve one-step linear inequalities using addition and subtraction.
- Solve one-step linear inequalities using multiplication and division.

Addition Property of Inequality

For all real numbers *a*, *b*, and *c*, if $a > b$, then ***a + c > b + c*** _____. The property also holds for $\leq$, $<$, and $\geq$.

1. Solve and graph.

$-4 < Q - 5$ ***Q > 1***

2. Solve and graph.

$N + 1 \geq -2$ ***N ≥ −3***

Multiplication and Division Property of Inequality (Part I)

For all real numbers *a*, *b*, and *c*, if a is positive and $b < c$, then

ab < ac _____ and $\frac{b}{a} < \frac{c}{a}$. The property also holds for $\leq$, $>$, and $\geq$.

3 Solve and graph.

$5c > 15$ **$c > 3$**

Multiplication and Division Property of Inequality (Part II)

For all real numbers a, b, and c, if a is negative and $b < c$, then

$ab > ac$ _____ and $\frac{b}{a} > \frac{c}{a}$. The property also holds for $\leq$, $>$, and $\geq$.

4 Solve and graph.

$\frac{x}{-3} \geq -2$ **$x \leq 6$**